



Province of the
EASTERN CAPE
EDUCATION

**NATIONAL
SENIOR CERTIFICATE**

IBANGA 12

SEPTEMBER 2021

IZIFUNDO ZOLIMO P1

AMANQAKU: 150

IXESHA: 2½ iiyure

Eli phepha lemibuzo linamaphepha ali-18.

IMIYALELO NENGCACISO

1. Eli phepha lemibuzo linama CANDELO AMABINI, angala ICANDELO A kunye ne CANDELO B.
2. Phendula YONKE imibuzo.
3. Qala impendulo yombuzo ngamnye ekuqaleni kwephepha ELITSHA.
4. Nombola iimpindulo zakho ngokuchanekileyo ngokwendlela yokunombola esetyenziswe kwiphepha lemibuzo.
5. Sebenzisa ikhatyulaytha engaprogranywanga.
6. Bonakalisa ZONKE ikhatyulayshinzi zakho, kuquka nefomula apho zifuneka khona.
7. Bhala ngocoselelo nangokucacileyo.

ICANDELO A**UMBUZO 1**

1.1 lindlela ezahlukeneyo zinikiwe njengeempendulo kulemibuzo ilandelayo, khetha impendulo efanelekileyo wandule ukubhala unobumba kuphela ecaleni kwenombolo yemibuzo (1.1.1–1.1.10) kwi NCWADI YOKUPHENDULA, umzekelo 1.1.11 B.

1.1.1 Iprocess apho ukutya kwehla nge alimentary canal ngokushwabana nokuvuleka kwezihlunu ibizwa ngokuba ...

- A yi-rumination.
- B yi-digestion.
- C yi-peristalsis.
- D yi-absorption.

1.1.2 Izakha mzimba ezikhusela nezomeleza umzimba ungahlaselwa zizifo nentsholongwane.

- A Khabohydrates
- B Ziproteins
- C Zilipids
- D Zifats

1.1.3 Ukunambitheka nokucolwa kwe low grade roughage for izilwanyana ezetyisayo ingaphuculwa ngoluhlobo lulandelayo ...

- (i) ukudibanisa roughage ne molasses.
- (ii) ukongeza ukutya nge non-protein nitrogen substances.
- (iii) ukongeza ukutya nge teff hay.
- (iv) ukongeza amasuntswana e urea ne biuret.

Nika indibanisela e CHANEKILEYO:

- A (i), (iii) kunye (iv)
- B (ii), (iii) kunye (iv)
- C (i), (ii) kunye (iv)
- D (i), (ii) kunye (iii)

1.1.4 Ukunqongophala kwe phosphorus kumzimba wesilwanyana ukhokhelela kwisifo esibizwa ngokuba ...

- A yi-goiter.
- B yi-anaemia.
- C yi-parakeratosis.
- D yi-pica.

1.1.5 Indlela yokubamba izilwanyana efama esetyenziswa ukubamba igusha:

- A Uyibamba phezulu ngemilenze engesemva.
- B Usebenzisa ineck clamp ukubamba igusha ime ndawonye.
- C Ukuqhuba iigusha uhamba emva kwazo.
- D Ukugibisela ngamatye ukuzibonisa apho ziya khona.

1.1.6 Ezi ayizompawu ze-intensive production enterprise:

- (i) Kusetyenziswa umhlatyana omncinci.
- (ii) Imali eninzi ityaliwe.
- (iii) Abasebenzi abaninzi bayasetyenziswa.
- (iv) I-enterprise ithatha umhlaba omninzi wokusebenza.

Khetha indibaniselwano eCHANEKILEYO:

- A (i), (iii), kunye (iv)
- B (ii), (iii) kunye (iv)
- C (i), (ii) kunye (iv)
- D (i), (ii) kunye (iii)

1.1.7 Oku kulandelayo ku YINYANI nge-enzootic diseases.

- A Isuka ebantwini yosulele izilwanyana.
- B Ichaphazela izilwanyana ezithile nezihlala kuloo ndawo.
- C Ayithathwa ngokuba yi contagious diseases.
- D Ibangela uphazamiseko kwi metabolic processes.

1.1.8 Le nkcazelo ingezantsi ibhekisa kwi life cycle ye single-host tick.

- (i) Amaqanda aqanduselwa ebengumbungu.
- (ii) I-nymph ikhula ibendala
- (iii) I-larvae ne nymph zigcinwa yi immediate host.
- (iv) I-larvae ikhula ibeyi nymph

Khetha indibaniselwano ECHANEKILEYO:

- A (i), (iii) kunye (iv)
- B (ii), (iii) kunye (iv)
- C (i), (ii) kunye (iv)
- D (i), (ii) kunye (iii)

1.1.9 Impawu ezithi zibonakale xa kusetyenziswa i-microscope kwimbewu yenkunzi yenkomo:

- A Ubungakanani
- B Umbala
- C Ukuxinana
- D Ukukhubazeka

1.1.10 ... kukuncamathela kwenkonyana esibelekweni sikanina.

- A I-copulation
- B I-synchronization
- C I-implantation
- D I-retention

(10 x 2) (20)

1.2 Bonisa ukuba inkcazelo eku **KHOLAM B** ibhekisa ku **A qha**, ku **B qha**, ku **A no B**, okanye ayingeni kuzo kwaphela (**AYIKHO**) Bhala u **A qha**, **B qha**, **A no B** okanye **AYIKHO** kwaphela ecaleni konombolo 1.2.1–1.2.5 umzekelo 1.2.6 B qha.

KHOLAM A			KHOLAM B
1.2.1	A:	Cafeteria style	Indlela yokongeza calcium borogluconate kwinkomo zobisi ezi milk fever
	B:	Injection	
1.2.2	A:	Lupins	li-protein-rich concentrates ezisuka kwizityalo ezisetyenziswa ukuzinzisa iroughages
	B:	Oilcake meals	
1.2.3	A:	Advanced technology	I-factor yokwandisa imveliso yezilwanyana phantsi kwe extensive farming
	B:	Provision of ventilators	
1.2.4	A:	Drenching	Indlela yokunikezwa kweyeza kwisikhumba sesilwanyana
	B:	Topical	
1.2.5	A:	Inexperience	I-factor eyenza ukungazali kwinkunzi ezincinci zenkomo
	B:	Nutrition	

(5 x 2) (10)

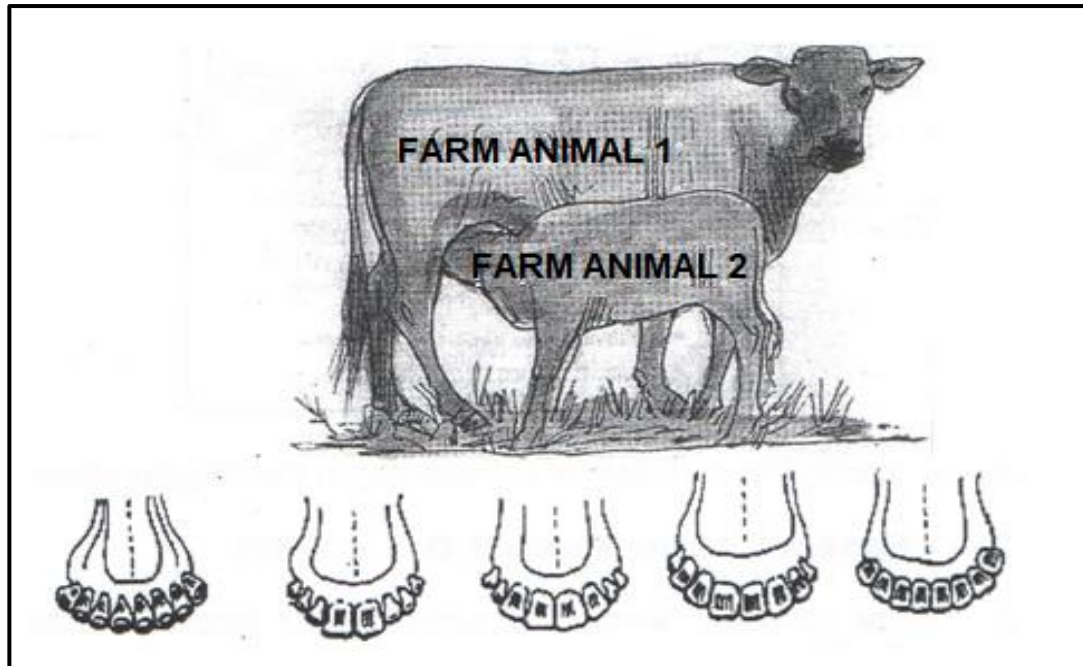
- 1.3 Nika igama ELINYE lezinkcazelo zingezantsi. Bhala igama kuphela ecaleni kwenombolo (1.3.1–1.3.5) kwi NCWADI YEEMPENDULO.
- 1.3.1 Umlinganiselo wokuphucuka kwe protein ekutyeni
- 1.3.2 Iinkonzo ezithi zinikwe ngurhulumente ngokugcina isilwanyana emva kokuvavanyelwa isifo
- 1.3.3 Ii-testes zenkomo zithi sishiyeke esinqeni zingaphumi nangona sesizelwe
- 1.3.4 Igama elinye xa inkunzi inomdla wokukwela imazi kodwa ingakwazi ukuzanelisa imazi zenkomo
- 1.3.5 Igama elinye elibizwa ngalo ithokazi lethole xa athe azalwa engamawele lona lingabinanzala (5 x 2) (10)
- 1.4 Tshintsha lamagama akrwelelwe umgca ngaphantsi abe YINYANI njengoko ENGEYONYANI. Lungisa lamagama anyaniseke ngokubhala ecaleni kwenombolo (1.4.1–1.4.5) KWINCWADI YEEMPENDULO.
- 1.4.1 I enzyme kumathumbu amancinci ethi iqhekeze i-fat molecule ibizwa ngokuba yi amylase
- 1.4.2 I-castration yiprocess yokususa amathole ancancayo koonina ngokupheleleyo
- 1.4.3 I-dilutant imthubi ngebala, butyiwarha kwaye ingqindilili ikhutshwa ngamabele inika izakha mzimba etholeni
- 1.4.4 I-spermatozoon isisiphelo se oogenesis
- 1.4.5 I-hermaphrodite lithokazi lenkomo elifuna ukukhwelwa kabini nakane phambi kokuba limithe (5 x 1) (5)

AMANQAKU EWONKE ECANDELO:A: 45

ICANDELO B**UMBUZO 2: ISONDLO KWIZILWANYANA**

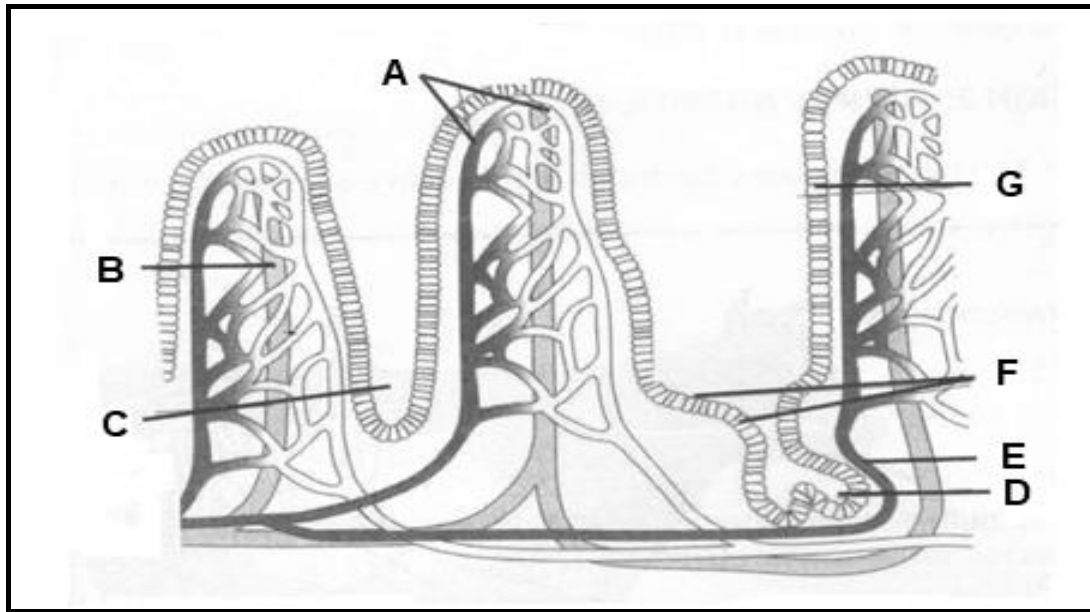
Phendula lombuzo ephepheni ELITSHA.

2.1 Lo MFANEKISO ungezantsi ubonakalisa amazinyo wenkomo.



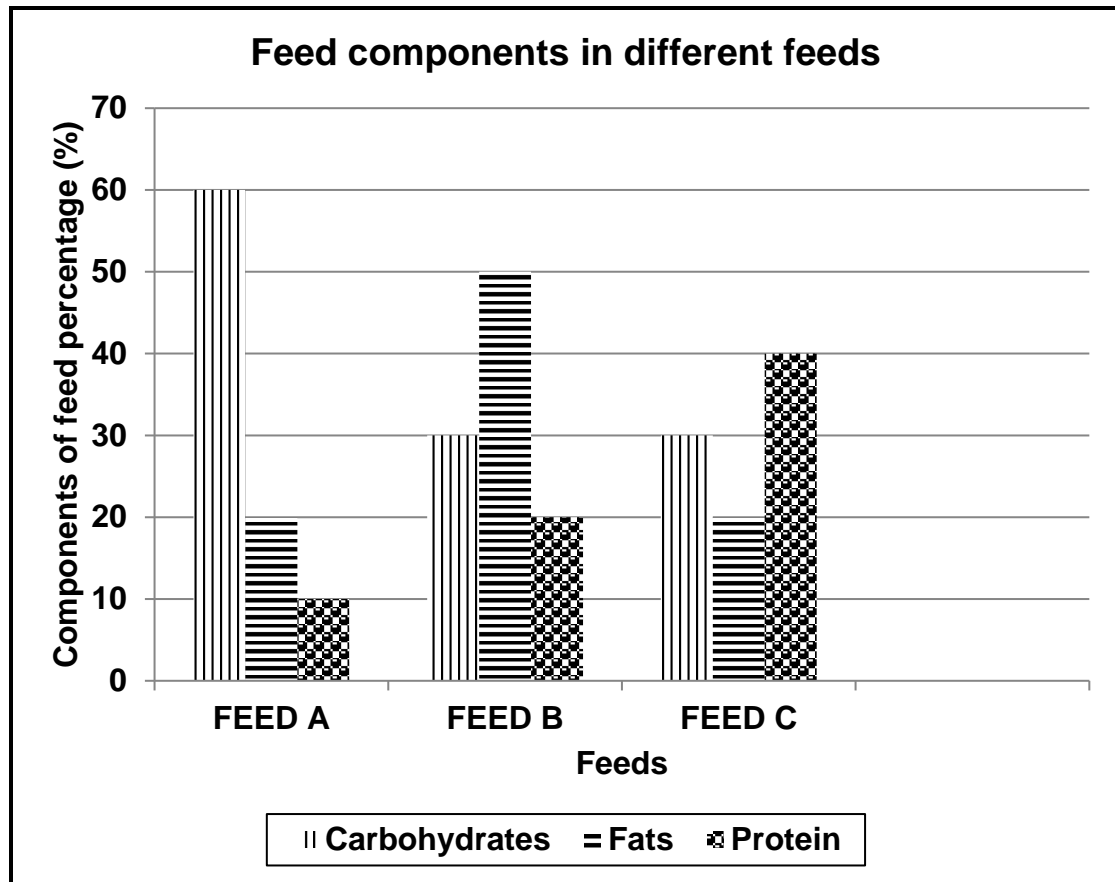
- 2.1.1 Xela ukuba lamazinyo angentla akumlebe ongezantsi okanye ongentla enkomeni. (1)
- 2.1.2 Nika uhlobo lwe digestion elithi lenziwe ngalamazinyo angentla. (1)
- 2.1.3 Chaza ukubaluleka kwamazinyo namathe ngokubonakaliswa yi **FARM ANIMAL 1**. (2)
- 2.1.4 Xela ilungu ezinkukhwini elithi lenze umsebenzi omnye njengoko kwenziwe ngalamazinyo angentla. (1)
- 2.1.5 Chaza ukuhamba kobisi ku **FARM ANIMAL 2** xa ilusela. (2)

- 2.2 Lo mfanekiso ungezantsi ubonakalisa ilingu ekuhanjiseni kokutya kwi alimentary canal.



- 2.2.1 Nika igama lelungu kwi alimentary canal apho kuthi kufumaneka khona elilungu lingentla. (1)
- 2.2.2 Xela inutrients ezithi zitsalwe njengezakha mzimba ku nombolo **A** kunye naku **B**. (2)
- 2.2.3 Nika iprocess elandelayo kokutsalwa kwezizakha mzimba ku MBUZO 2.2.2. (1)
- 2.2.4 Xela ibe NYE indlela elidalwe ngayo elilungu khonukuze lenze umsebenzi walo ngokufanelekileyo. (1)

- 2.3 Legrafu ibonakalisa ukwehlukana kokutya ngokwezinongo ekuxutywe nazo. (khabohydrates ezicolekileyo, i-fats ne-protein).



2.3.1 Khetha ukutya kwigrafu okunokuthi kulungele oku kulandelayo:

- (a) Izilwanyana ezincinci ezisakhulayo
- (b) Ukutyebisa iigusha ezindala
- (c) Ukunika i-insulation kulungiselelwa ukutshintsha kwemozulu (3)

2.3.2 Masithi u - feed **B** une 85% TDN, Bala iNutritive Value yokukutya. (3)

2.3.3 Qikelela iratio ka- feed **A** no feed **C** enokudityaniswa khonukuze kufumaneke ukutya okune 18% DP. (4)

- 2.4 Ii-chemical substance ziyasetyenziswa apho kutyiswa khona inkomo zenyama ukwandisa ixesha lokukhula (growth rate).

Nika i-substance onokuthi uyinike izilwanyana elungele ezi meko zilandelayo:

- (a) I substance enikwa inkomo ezikwi feedlot izenze zingabikho ndlongo - ndlongo
- (b) I substance enikelwa ukwandisa imetabolic rate yezilwanyana. (2)

- 2.5 Le theybhile ingezantsi ibonakalisa ukuveliswa kwe lucerni kwi kg DM/Ha kangangonyaka omNYE kwi 42-hectare efama.

INYANGA ZONYAKA	UBUNGAKANANI BOKUVELISWA KWE LUCERN (KG DM/HA)
Januwari	1 200
Februwari	800
Matshi	200
Epreli	200
Meyi	100
Juni	50
Julayi	50
Ogasti	200
Septemba	300
Oktobha	400
Novemba	600
Disemba	1 200

- 2.5.1 Sebenzisa lenkcazelo ingentla ukuzoba i-bar grafu. (6)
- 2.5.2 Ukuba umfama une 35 yeenkomo ezisengwayo, inye ifuna 5 kg ye-lucerni ngosuku ukuze ivelise ngokwaneleyo. Bala i-total amount yelucerni ezakuthi ifunwe zinkomo ngo Juni. (Bonakalisa ZONKE izibalo zakho.) (2)
- 2.5.3 Qinisekisa ukuba ingaba izakube ikho na ilucerne eyanelelyo ngo Juni. (Bonakalisa ZONKE izibalo zakho.) (3)

[35]

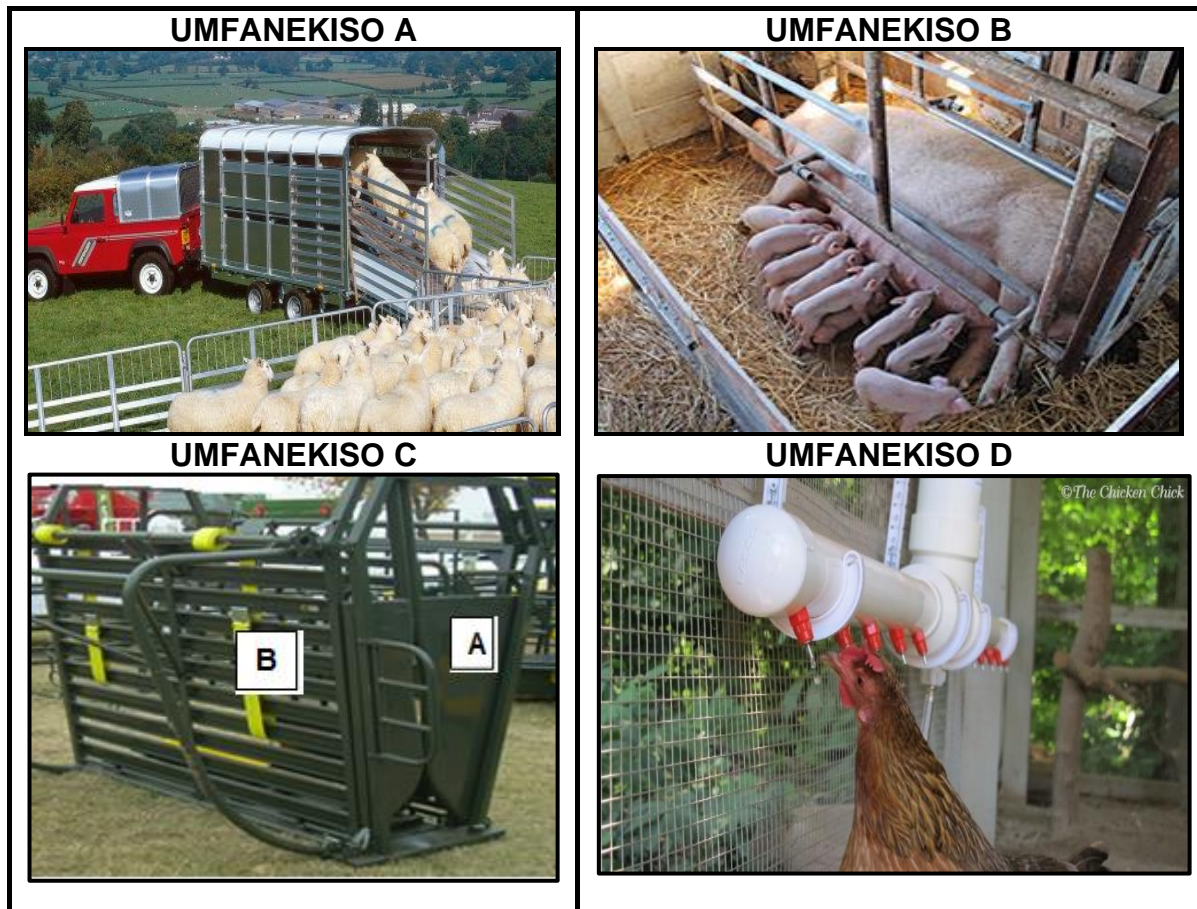
UMBUZO 3: UKUVELISWA KWEZILWANYANA, UKUKHUSELWA KUNYE NOKULAWULWA KWAZO

Phendula lombuzo ephepheni ELITSHA.

- 3.1 Lomfana une 40 yehectars yomhlaba kwi sourveld area ulime i- kikuyu njengokutya kokugqibelelisa ezilwanyaneni. I 20 yehectare elungiselelwe amadlelo yohlulwe yazi nkampu eZINE kusetyenziswa amahlahla ahlabaya ukubiya iikampu ezo, izilwanyana eZIHLANU zithi zitye kwinkampu nganye ngokuthi zitshintsha – tshintshane. Umfama ukholelwa ukukhweliseni izilwanyana eziqhelene nendawo enye yokutyela endaweni yokuyenza ngokwakhe elidlelo likwazi ukumelana nokondla ezizilwanyana.

- 3.1.1 Nika igama le-animal production system esetyenziswe ngu mfama kwesisicatshulwa esingentla. (1)
- 3.1.2 Xela izizathu zibe ZIBINI kumbuzo owuphendule ku MBUZO 3.1.1. (2)
- 3.1.3 Nika i- farming system enokuthi idityaniswe ne production system eku-MBUZO 3.1.1. (1)
- 3.1.4 Chonga indlela kwesisicatshulwa singentla ekunokwandiswa ngayo imveliso phantsi kwale miba ilandelayo:
- (a) Kwi-nutrition
 - (b) Kwi-reproduction
 - (c) Kwi-general enterprise management (3)

3.2 Le mifanekiso ingezantsi ibonakalisa izixhobo ezisetyenziswa kwi-mveliso yezilwanyana.



- 3.2.1 Nika igama lesixhobo esibonakaliswe ku**MFANEKISO B** naku **MFANEKISO D**. (2)
- 3.2.2 Chaza isizathu sokusetyenziswa kuka **MFANEKISO A** kunye no **MFANEKISO C**. (1)
- 3.2.3 Chonga indlela ZIBEMBINI athe wenziwa ngayo ku**MFANEKISO B** ku **MFANEKISO C**. (2)
- 3.2.4 Ipermit yenye yencwadana ezifunekayo xa uhambisa izilwanyana ngo **MFANEKISO A**. Chaza eminye yemithananango equlethwe yilencwadana. (2)

3.3 lihagu zezinye zezilwanyana ezothuka msinya kwaye zinobuthathaka, zithi zibonakalise indidi zemikhwa nezimbo ngokungonwabi kwazo.

3.3.1 Nika ZIBEMBINI impawu zokungonwabi ezihagwini. (2)

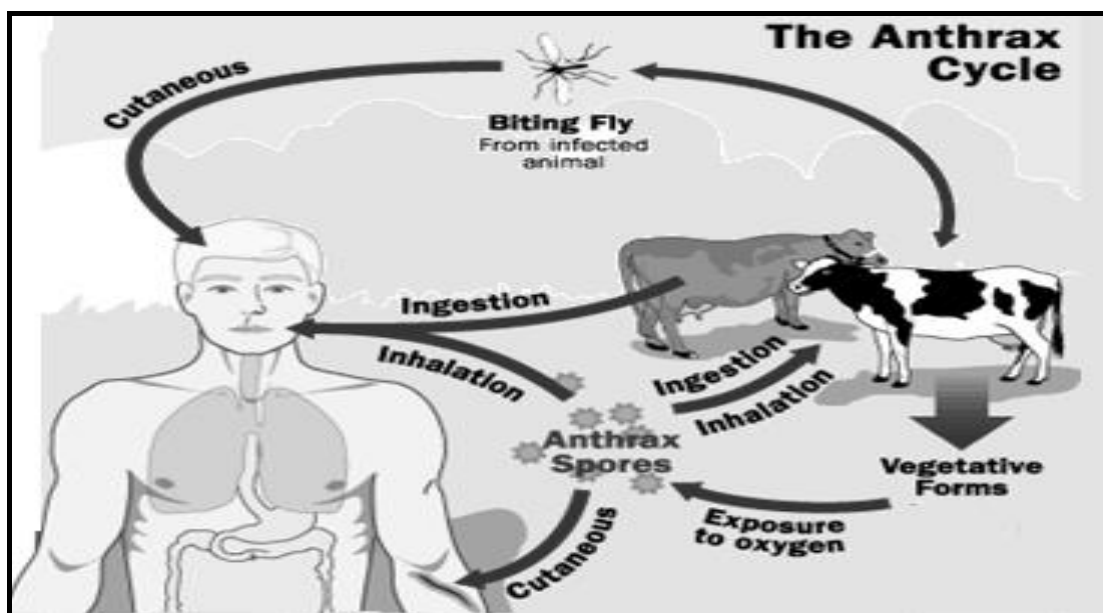
3.3.2 Ukubanjwa kwezilwanyana ngendlela engafanelekanga xa zithuthwa inganegalelo kwimveliso yazo Ngqina esi sivakalisi nge zizathu zibe ZIBINI. (2)

3.4 Kubalulekile ukuvavanya rhoqo izilwanyana ngokujonga izifo khonukuze zikhuselwe kuselithuba.

3.4.1 Nika impawu ZIBEMBINI ezibonakalisa izilwanyana ezigulayo. (2)

3.4.2 Bonakalisa indlela ZIBEMBINI zokuvavanyela izifo kwizilwanyana. (2)

3.5 Lo mzobo ungezantsi ubonakalisa ilife cycle yesifo i-anthrax.



3.5.1 Chonga i-pathogen eyenza esi sifo sibonakaliswe ngentla apha. (1)

3.5.2 Chonga kuloMzobo ungentla indlela zibeMBINI esithi sisasazeke ngayo esi sifo. (2)

3.5.3 Esi sifo singentla yi-zoonotic disease. Ngqina esisivakalisi ngokubhekiselele kulo Mzobo ungentla. (2)

3.5.4 Nika iinxaxheba ZIBEMBINI umfama anokuthi azenze ukukhusela ukunaba kwesi sifo esikumzobo ongentla xa sithe saqhambuka. (2)

3.6 Amakhalane ngawona asasaza izifo kwizilwanyana zasefama. Avula umngxunya efeleni lwesilwanyana avumele i-pathogens zigqobhoze kulo mingxunya zithi zenze isifo emva koko.

3.6.1 Zikoluphi udidi ezizimfi-mfithi gazi zichazwe ngentla apha (1)

3.6.2 Nika isizathu sempendulo yakho ekuMBUZO 3.6.1. (1)

3.6.3 Amakhalane athi ahlula-hlulwe ngokwe life cycle yawo. Nika igama lamakhalane ngokwezindidi zilandelayo:

(a) I-three-host tick

(b) I-one-host tick (2)

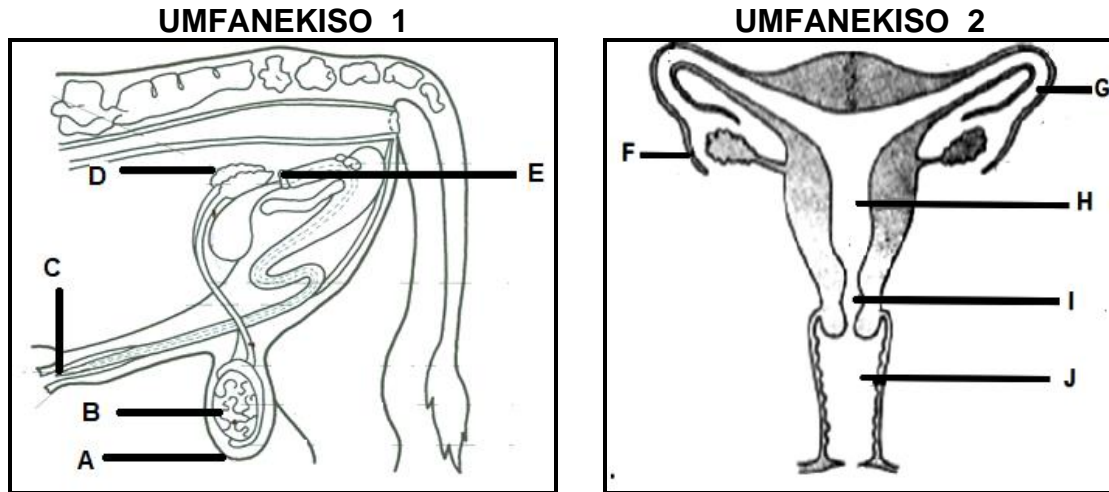
3.6.4 Xela zibe MBINI i-economic impacts zamakhalane kumfama. (2)

[35]

UMBUZO 4: UKUVELISWA KWEZILWANYANA

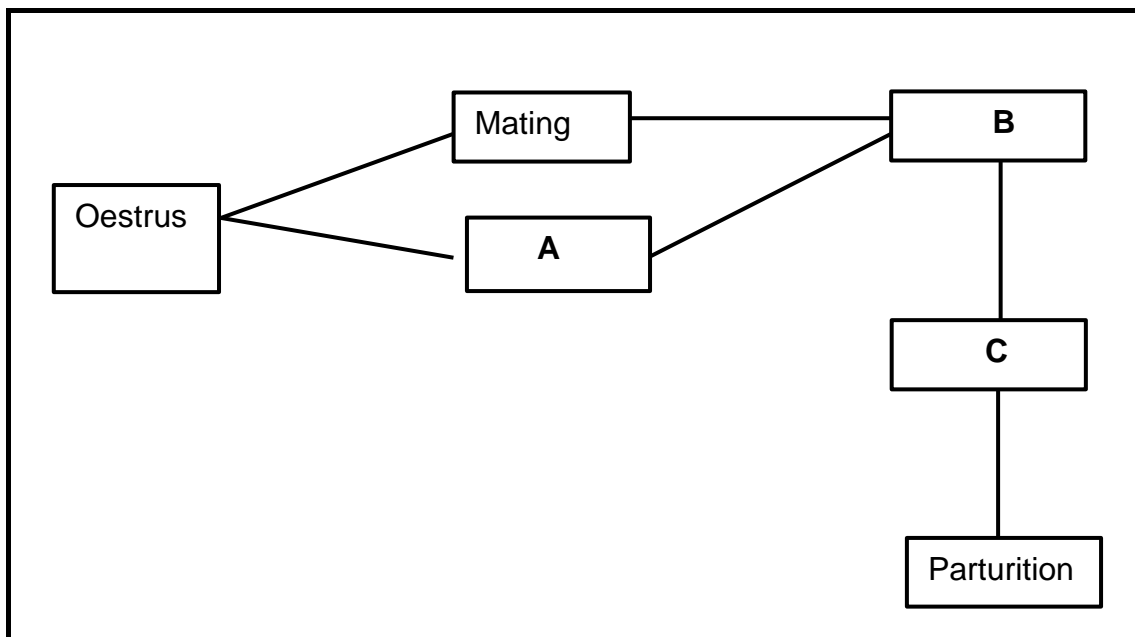
Qala lombuzo ephepheni ELITSHA.

4.1 Le MIFANEKISO ingezantsi ibonakalisa amalungu enkunzi nezemazi yenkomo.



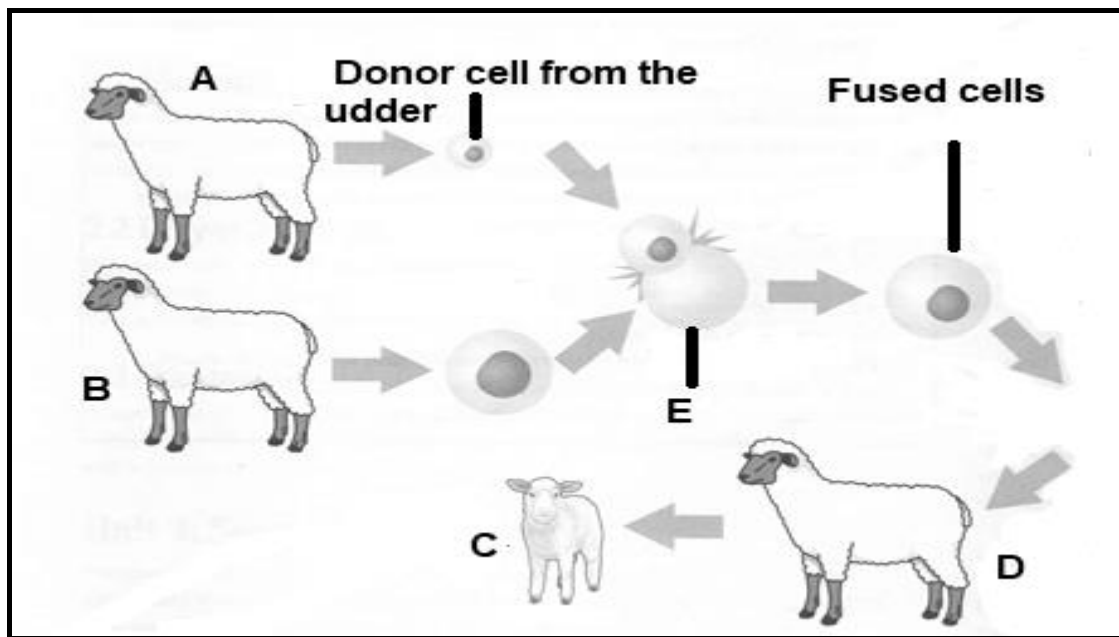
- 4.1.1 Chonga inombolo kule mifanekiso ingentla apho kuthi kwenzeka khona oku kulandelayo:
- (a) I-spermatogenesis (2)
 - (b) Ukubekwa kwesemen xa kusenziwa i-artificial insemination (1)
 - (c) I-sperm cell sidibana ne egg cell (1)
 - (d) I-copulating organ kumfanekiso **A** naku mfanekiso **B** (1)
- 4.1.2 Nika i-membrane esezantsi nesesiphakathini ejikeleze ithole ku-part nombolo **H**. (2)
- 4.1.3 Amalungu anombolwe **A** no **F** zidlala indima ebaluleke kakhulu kulendlela zilwanyana ibonakaliswe ngentla apha. Ngqina esi sivakalisi ngokuchaza umsebenzi wala malungu. (2)

4.2 Le flow chart ingezantsi ibonakalisa i-reproductive processes zenkomo.



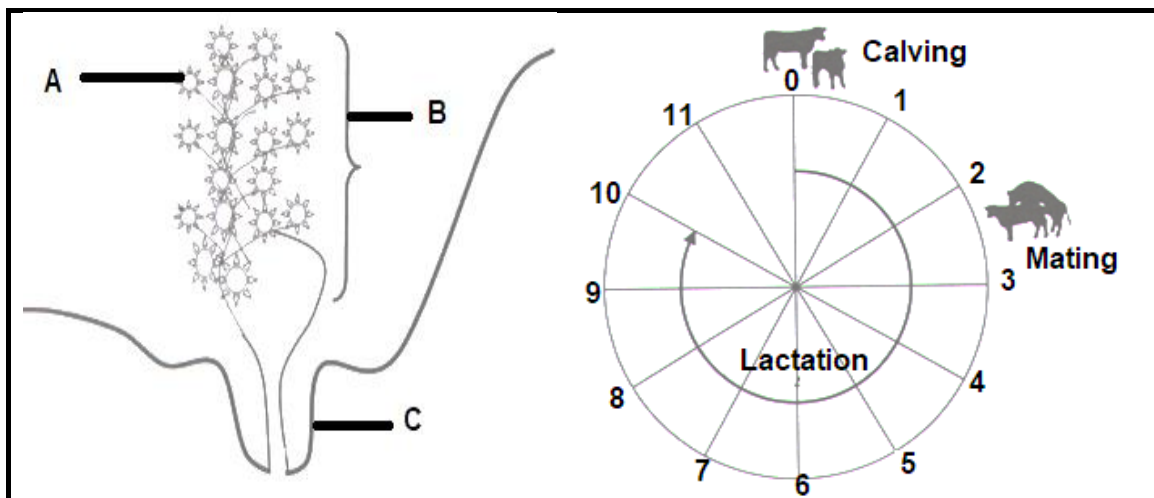
- 4.2.1 Nika i-processes ezinombolwe ku-**B** no **C**. (2)
- 4.2.2 I-process ezinombolwe ngo **C** ziphawulwe ngezi-tages ezithathu. Nika i-stage sokuqala nesokugqibela. (2)
- 4.2.3 I-process enombolwe ngo **A** ingenziwa phambi kwexesha enkomeni Nika igama laloprocess. (1)
- 4.2.4 Xela ZIBEMBINI i-economic benefits zale process uyinike kuMBUZO 4.2.3 kuMfama. (2)
- 4.2.5 Nika ifactors ZIBEMBINI ezinokubangela ukungaphumi kwe placenta xa inkomo izala. (2)

4.3 Lo mzobo ungezantsi ubonakalisa ukuzalwa lwezilwanyana.



- 4.3.1 Nika igama lalereproductive process ibonakaliswe ngentla apha. (1)
- 4.3.2 Ngokubhekiselele kuloMfanekiso ungentla, chaza isizathu sempendulo oyinike ku MBUZO 4.3.1 ongentla. (2)
- 4.3.3 Nika igama le process eyenzeke kwi cell enombolwe ngo E. (1)
- 4.3.4 Chonga inombolo (letter) yegusha ethi idibane nalembalelwano ingezantsi:
- (a) Le gusha ingena kwindawo yesurrogate.
 - (b) Iyafana ngokweGenes negusha enombolwe ngo C.
 - (c) Inikezele nge-egg cell. (3)
- 4.3.5 Nika injongo ZIBEMBINI ze-reproductive process ebonakaliswe ngentla apha. (2)

4.4 Lo mfanekiso ungezantsi ubonakalisa ibele kunye ne pie chart.



- 4.4.1 Nika amalungu ezimbolwe **A**, **B** kunye no **C**. (3)
- 4.4.2 Chaza umsebenzi welungu elinombolwe ngo **A** ngexesha le lactation. (1)
- 4.4.3 Nika isigaba kwi lactation cycle phakathi kwenyanga yeshumi nakwi xesha elilandelayo lokuzala elinye ithole (1)
- 4.4.4 Chaza ukubaluleka kwesi sigaba usinike kuMBUZO 4.4.3 kwi lactating cow. (2)
- 4.4.5 Chonga kule lactation cycle zingaphi inyanga ezithathwe yilactation period. (1)

[35]

AMANQAKU ECANDELO B: 105
AMANQAKU EWONKE: 150